

Remarks/Arguments

This response is to the Office Action dated November 27, 2007.

Claims 2, 5-8 and 10 remain in this application.

Claims 2 and 10 have been amended to make clear what the chemical composition of a thermoplastic elastomer is as has been defined by the prior art and as is well known to one of ordinary skill in the art.

Claims 2, 5-8 and 10 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting. In the event that conflicting claims are allowed, Applicants will provide a Terminal Disclaimer.

Claims 2, 5-7 and 10 have been rejected under 35 USC 102(b) or in the alternative under 35 USC 103(a) in view of GB 2,302,042 A. Applicants disagree.

The reference fails to teach each and every element of the present invention and as such is not an anticipatory reference. In particular, the reference fails to teach the use of a thermoplastic elastomer that is formed through the thickness of the screen and which has a thickness greater than that of the screen through which it is formed.

The reference clearly teaches that the EVA copolymer is placed "**between**" the layers not through the screen layers.(Applicants emphasis)/ See GB 2302042, Abstract, line 3, "positioned **between** the elements"; Page 1 third paragraph "**between** the filtration medium and support material"; Page 2, line 9, "positioned **between** the structural elements" and line 35 "**between**"; Page 4, lines 27-28 "positioned **between** the filtration media"; Page 5, lines 1-2 "**between** the filtration media"; Page 6, lines 16-17 "**between** the support materials"; line 34 "positioned **between** the

membrane"; Page 7 lines 12-13 "positioned **between** the membrane and the support material"; and claim 1 line 5 "positioned **between** said structural elements".

The only statement it has to embedding the copolymer layer is at pages Page 6, line 27 and page 7, lines 17-19 and that additional diffusion layer is **also between** the membrane and support layer may preferably be "partially embedded in the copolymer positioned **between** the membrane and the support material." (Applicants emphasis).

Contrary to the statement made in the Office Action, it is clear that the reference fails to teach the gasket material extending through the layers, never mind the claimed screen as is required by the present claims. At best, it states that at best a middle layer that is between the two layers can be partially embedded into the copolymer layer that is also between the filter and support layers.

Additionally, it is clear that the copolymer layer of the reference does not extend beyond the thickness of the layer through which it must extend as is required by the present claims. Contrary to the assertion in the Office Action, none of the cited portions of the reference teach "....seals extending at least 0.001, 0.002, or 0.005 from the surfaces of the screens....".

The abstract cited for support of this proposition only states: "A filtration device comprises at least two constructional elements which are mated together to form an edge, and is characterised in that at least a part of the said edge is fluid tight sealed with and ethylene-vinyl acetate copolymer **positioned between the elements.**" (Applicants emphasis). Nowhere is there support for the assertion that the reference teaches "....seals extending at least 0.001, 0.002, or 0.005 from the surfaces of the screens...." in that cited passage.

Likewise, the third paragraph of page 1 cited for support of this proposition only states: "a variety of sealant and gasket materials have been used **between** the filtration medium and support

material of a supported filtration medium assembly, as well as **between** adjacent support materials of back – to - back supported filtration medium assemblies, so as to control fluid flow and prevent leakage. Such materials include polyurethane which can provide fluid-tight seals but suffers from high extractables which can contaminate the fluid being filtered. Other materials with low extractables, such as polyethylene, however, can be brittle and can have little compliance, thereby allowing for fluid leakage pathways, particularly in filtration devices with motive means, such as dynamic filtration devices.” (Applicants emphasis added). Nowhere is there support for the assertion that the reference teaches “....seals extending at least 0.001, 0.002, or 0.005 from the surfaces of the screens....” in that cited passage.

Likewise the cited sections at Page 2, Page 3 and Page 7 are silent both on the material extending through the layer as well as any thickness extending beyond it. To the contrary the only thing they teach is that the copolymer is between adjacent layers to form a gasket.

The office action also makes the statement that the copolymer is heat sealed and penetrates several layers, yet provides no citation to support this assertion and Applicants see none. They specifically ask that the examiner provide them with the citation upon which the examiner has relied for this assertion. While the material is described as preferably having a lower melting point than the other materials, there is no teaching or suggestion that it in fact heat melted. To the contrary, at Page 7, line 35 to Page 8, line 7, the reference discusses the “excellent adhesion and compliance characteristics” of the copolymer. One of ordinary skill in the art would conclude that adhesion is the mechanism for attachment of the copolymer **between** the adjacent layers.

As the standard for anticipation is one of strict identity and “the reference must teach every aspect of the claimed invention either explicitly or inherently.” (MPEP section 706.02IV, lines 6 and 7)

and the cited reference has failed to teach the claimed elements of the present claims, this reference is not and cannot be an anticipatory reference. As such, the rejection based on 35 USC 102(b) is respectfully requested to be withdrawn as it fails to provide a reference which contains all of the claimed elements of the present claims and therefore no basis for rejection under 35 USC 102 has been properly made.

Likewise there is no suggestion or motivation absent the claims and teachings of the present invention to have the gasket material extend beyond the layers. In fact given the clear and unambiguous teachings of the reference to keep the gasket between the layers, one of ordinary skill in the art would not have thought to have extended the gasket material beyond the screen layers. As such no prima facie case of obviousness has been established.

The office action also states that the seal of the reference (EVA copolymer) is a thermoplastic elastomer and states that the Applicants "list EVA as one of the preferred materials for the seal in the specification."

Applicants do mention **EVA** copolymers as a thermoplastic that is suitable for a seal. However the **claims** have been **narrowed to** claim only **thermoplastic elastomers** which as specified by Applicants in their specification **does not include EVA copolymers**.

Page 8, lines 30 -39 states as follows: "The seal is formed of any elastomeric material. The material does not need to be very elastic but it should have some ability to maintain the seal with the adjacent layers during flexion or compression. Preferably it has a durometer of from about 60 to about 100. Suitable materials include but are not limited to **thermoplastics, such as** polyethylene, polypropylene, **EVA copolymers**, alpha olefins and metallocene copolymers, PFA, MFA, polycarbonate, vinyl copolymers such as PVC, polyamides such as nylon, polyesters, acrylonitrile-

butadienestyrene (ABS), polysulphone, polyethersulphone, polyarylsulphone, polyphenylsulphone, polyacrylonitrile, polyvinylidene fluoride (PVDF), and blends thereof, **thermoplastic elastomers such as Santoprene® polymer**, EPDM rubber, thermosets such as closed cell foamed urethanes, and rubbers, either natural or synthetic. "(Applicants emphasis).

As to the three questions raised in the office action, Applicants comment as follows:

It is clear that EVA while a thermoplastic, it is not a thermoplastic elastomer from the teachings of the present invention or the prior art or to one of ordinary skill in the art.

The office action cites a Wikipedia citation to EVA copolymers. Applicants contest the validity of a citation from Wikipedia as to its reliability and notes that the Patent and Trademark Office have either elected not to rely on Wikipedia references or require additional separate supportive documents when using such citations.

Applicants point to the statement made by Commissioner of Patents in 2006:" "The problem with Wikipedia is that it's constantly changing," Patents Commissioner John Doll said. "We've taken Wikipedia off our list of accepted sources of information." "Kicking Wiki Out Of The Patent Office", By Lorraine Woellert, Business Week, September 4, 2006.

Even if the Wikipedia reference is valid, it does not support the examiner's assertion. It states "It is a polymer that approaches elastomeric materials...yet can be processed like other thermoplastics." (paragraph 2, lines 1-2). That statement however does not teach or suggest that EVA copolymer is a "thermoplastic elastomer "as is well known to one of ordinary skill in the art.

One of ordinary skill in the art well knows that thermoplastic elastomers such as Santoprene® resins are formed of a blend of an ethylene-propylene diene monomer (EPDM) and polypropylene. See US 5,021,475 teaches that Santoprene® (from the Monsanto Company of St.

Louis, Mo.) is a thermoplastic elastomer comprising a blend of an ethylene-propylene diene monomer (EDPM) and polypropylene.

Applicants respectfully contend that Santoprene® and "thermoplastic elastomers" are each well known and commonly used in the art. Applicants conducted a specification and a claim search for Santoprene® on the USPTO's Patent and Full Text Database and came up with 1601 hits. In addition, a similar search was conducted for "thermoplastic elastomers" and Applicants came up with 9424 hits.

See US 5,595,164 which teaches thermoplastic vulcanizates that are commercially obtainable, such as Santoprene® (from Advanced Elastomer System, Akron, Ohio), are comprised a polypropylene resin component and an EPDM rubber component. (col. 2, lines 53 to 67)

Other examples readily available to one of ordinary skill in the art to help determine what a Thermoplastic elastomer is or is not include , by way of example only and not exhaustive of the all references found, that contained both Santoprene® and thermoplastic elastomer include US 5,626,369 issued on May 6, 1997, see col. 4, lines 12-18; and US 6,646,084 , see col. 7, lines 17-45.

Applicant respectfully contends that both the term thermoplastic elastomers is commonly used and well known to one of ordinary skill in the art and that it is comprised of a polypropylene resin component and an EPDM rubber component. It is also contended that EVA copolymer is not and has never been known to one of ordinary skill in the art as a "thermoplastic elastomer, rather it has always been known as thermoplastic.

The office action states the EVA copolymer is heat sealed yet the cited portions only say there is a liquid tight seal formed or that the diffusion layer (which is with the Eva between the two layers) is partially embedded in the polymer. To the contrary, at Page 7, line 35 to Page 8, line 7, the reference discusses the "excellent adhesion and compliance characteristics" of the copolymer. One of ordinary skill in the art would conclude that adhesion and/or pressure is the mechanism for attachment of the copolymer **between** the adjacent layers.

As to question 3, Applicants cite the portions above in which the diffusion layer is clearly between the layers. The examiner's hand drawings fail to overcome the specific and clear teachings of the reference that the EVA copolymer is "between" the layers and doesn't penetrate through them. There is no teaching or suggestion it does so. In fact the only teaching in the reference is to an additional layer between the layers and there it is only partially embedded in the EVA. As such, one cannot ignore the clear teachings of the reference and mold it like a piece of clay into something which it is not. It would not have been obvious to one of ordinary skill in the art to construe the reference as has been done in this office action in view of the clear and contrary teachings to the opposite.

As such the prima facie case of obviousness has not been established or if established has been rebutted by the above argument.

Claims 2, 5-8 and 10 have been rejected under 35 USC 103(a) over Rogemont (US 4,701,234) in view of the GB reference and/or Towe (US 6,235,166). Applicants disagree.

The office action states that Rogemont fails to teach or suggest a thermoplastic elastomer but that the GB reference does and that it would have been obvious to substitute the EVA copolymer of the GB reference for the raw, cured in place silicone of Rogemont. Applicants disagree.

The office action's position is based upon the disclosure in the GB reference that its EVA copolymer has low extractables and layers can be sealed together into one body using the material. The Office Action fails to consider the clear teaching that the EVA layer of the GB reference is used between layers of the device and it uses its good adhesive properties to bond the layers together or that Rogemont uses raw silicone and then uses compression and heat to cause the raw material to penetrate the mesh and then polymerize.

What teaching is present to motivate one skilled in the art to use the EVA material of the GB reference in the process of Rogemount? The skilled artisan would have to ignore the teachings of the GB disclosure regarding the placement of the EVA between the layers and using its excellent adhesion properties to hold the layers together, focus only on the EVA material itself, and somehow arrive at the conclusion that it could be compressed under pressure and heat as taught by Rogemount to fill the mesh of Rogemount.

EVA is a thermoplastic not a thermoplastic elastomer as claimed in the present invention and it would be solid until melted. However in the Rogemount process, the heat used to polymerize the raw silicone would cause the EVA copolymer to melt and flow in uncontrollable ways and not form the seal between the layers as it had in the GB reference. One of ordinary skill in the art would not have been suggested or motivated to use the GB EVA in the Rogemount process as suggested in the present office action.

As stated by the Federal Circuit in *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1986), "One cannot use hindsight reconstruction to pick and choose from isolated disclosures in the prior art to deprecate the claimed invention."

Of similar import is *In re Wesslau*, 147 U.S.P.Q. 391, 393 (CCPA 1965):

"It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art." (Emphasis added).

The combination of the two references would not have led to the claimed invention. At best the cited combination would have led to the use of the polymerizable thermoset silicone of Rogemont

in the device of the GB reference or the use of the EVA layer between the various layers, relying on the "excellent adhesion" of the EVA to bond the layers together rather than the molding and heating of Rogemount. However that is not the presently claimed invention.

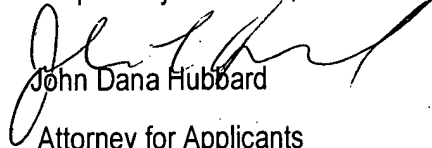
Towe does not overcome the defects of the cited combination. While Towe does teach the use of thermoplastic elastomers, it also teaches that the **mesh (26)** is of the **same height** as the **polymer** (see Figure 2B) and is attached to or embedded in the inner peripheral edge of the polymer (18). There is no teaching or suggestion in Towe to use its material in the process of Rogemont and even if one did, it would not have been obvious nor would it have had a predictable outcome to one of ordinary skill in the art to use it a manner such that the material extended beyond the plane of the layer to which it is attached. Given the teachings of the references it would have been predictable to have either had the material between the layers or even with the layers by attaching it to the edge.

As such the prima facie case of obviousness has been rebutted and the claims are believed to be in condition for allowance.

Appl 09/937,114
Amdt dated May 22, 2008
Reply to Office Action of November 27, 2007

Reconsideration and allowance are respectfully requested in view of the foregoing amendment and remarks.

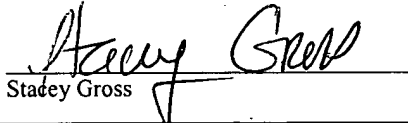
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